Geocoding Practice
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Introduction

The following are recommended practices procedures for geocoding. State agencies should make their best efforts to follow these guidelines.

Background

Geographic Information Systems (GIS) are systems of hardware and software interacted with by users which store/retrieve, analyze, display, capture and output spatial data for the intent of making decisions. The purpose of the geocoding standard is to assure that State government is able to take advantage of geocoding services to provide more accurate place-based information and mapping for emergency preparedness and response, fire protection, public health and safety, law enforcement, education, environmental management, land use planning, economic development, property management, fraud analysis and detection, tax collection, and other uses.

Composite Service

It is a State of California practice to develop and use composite geocoding services in the following order:

- Address Point or site address parcel centroid then;
- Street center line file (best possible industry licensed data if funding permits)
- Street center line (publically available – US Census TIGER)
- ZIP+4 centroids
- ZIP (5 digit only) centroids
- Place name (e.g. city name)

Address Entry

It is a State of California practice to geocode the data at the time of data entry, so that address standardization, validation and end user confirmation of the correct location can occur. While we understand that address geocoding often cannot happen at the time of entry and that batch geocoding is often the only opportunity to geocode, the practice is to implement system design criteria such that geocoding CAN happen at the time of entry. In this instance the data entry person can be given the

opportunity to edit and correct errors thus eliminating significant amounts of wasted time and effort later in the process.

Offset

It is a State of California practice, when using street centerline data, to off-set the resulting geocode to the appropriate street side as defined by the "Left Side" or "Right Side" in reference center line data by a minimum of 15 meters. Offsetting geocodes improves the reliability of ancillary data management returned from the geocoding process (e.g. assigning a county, legislative or other district to the geocode).

The Statewide Information Management Manual (SIMM), Section 58D, Enterprise Architecture (EA) Standards includes all EA Standards, and SIMM Section 158 includes all EA Practices documents.

Further information on geocoding and exemption requests can be found in the SIMM under the Enterprise Architecture Standards Section 58.

Privacy and Security

It is a State of California best practice to recognize that a street address geocode constitutes personal "identifiable" information and therefore must be securely administered in full compliance with all applicable federal and state privacy laws and regulations, including but not limited to, the Health Insurance Portability and Accountability Act (HIPAA).

Authorities

As described in Government Code Section 11545, the OCIO has broad responsibility and authority to guide the application of Information Technology in California State government. This includes establishing and enforcing state IT strategic plans, policies, and standards.

Geographic Information Systems (GIS) have a significant IT component, and thus fall with the jurisdiction of the OCIO.

Implementation

The Geocode and Geocode Projection EA Standards apply to all new data system development for IT projects approved beginning in January 2010 that are initially funded in the Budget Act of 2010.

For systems that are already in place, state agencies should review the EA Standards, and incorporate implementation or retrofit plans into their Agency Information Management Strategy.

Exceptions to the EA Standards may be submitted to the OCIO by following the "OCIO EA Compliance Component Instructions" found in the SIMM 58A, Enterprise Architecture Developers Guide.

Data stored in individual desktop productivity tools, such as spreadsheets, is not subject to the associated EA standards. However, agencies interested in geocoding such data for mapping purposes are encouraged to follow the EA Standards and this EA Practice.